WHAT IS CLAIMED IS:

1. A method for planarizing a borophosphosilicate glass (BPSG) layer deposited over a substrate, said method comprising:

loading a substrate having a BPSG layer deposited thereover into a substrate processing chamber, said BPSG layer having an upper surface that is generally non-planar; and

exposing said substrate to an ultraviolet (UV) light at conditions sufficient to cause a reflow of said BPSG so that said upper surface is generally planar.

2. The method as in claim 1, further comprising producing said UV light with a UV lamp.

3. The method as in claim 1, further comprising producing said UV light with a laser.

4. The method as in claim 1, wherein said UV light has a wavelength of about 150 nm ± 50 nm.

5. The method as in claim 1, wherein said UV light has an energy level that is greater than about 10 electron volts (eV).

6. The method as in claim 1, wherein said UV light has an energy level that is about 15 eV.

7. The method as in claim 1, wherein said exposing step has a duration that is between about thirty (30) seconds and about fifteen (15) minutes.

8. The method as in claim 1, further comprising maintaining a temperature in said substrate processing chamber between about 20 degrees Celsius and about 100 degrees Celsius during said exposing step.

9. The method as in claim 1, wherein said exposing step comprises exposing said substrate to said UV light having a desired wavelength and a desired energy level to break at least some SiOH bonds in said BPSG layer.

10. The method as in claim 1, wherein said exposing step densifies said BPSG layer.

11. The method as in claim 1, wherein said BPSG layer comprises a premetal dielectric (PMD) layer.

12. A method for planarizing an insulating layer deposited over a substrate, said method comprising:

providing said substrate having said insulating layer deposited thereover;

providing a UV light source;

exposing said substrate to UV light from said UV light source; and

maintaining said UV light at conditions sufficient to reflow said insulating layer to produce a generally planar insulating layer upper surface.

13. The method as in claim 12, wherein said insulating layer comprises borophosphosilicate glass (BPSG).

14. The method as in claim 13, wherein said maintaining step comprises maintaining said UV light at an energy level that is at least about 10 eV for a duration that is at least about 30 seconds to produce said reflow of said BPSG.

15. The method as in claim 13, wherein said maintaining step comprises maintaining said UV light at a wavelength of about 150 nm and for a duration that is at least about 30 seconds.

16. A method of forming a planarized insulating layer, said method comprising:

providing a substrate having a non-planar upper surface;

depositing an insulating layer over said upper surface, said insulating layer having a generally non-planar upper surface; and

exposing said insulating layer to a UV light at conditions sufficient to cause said insulating layer to reflow so that said insulating layer upper surface is generally planar.

17. The method as in claim 16, wherein said insulating layer comprises borophosphosilicate glass (BPSG).

18. The method as in claim 17, wherein said depositing step comprises:

inserting said substrate into a substrate processing chamber; and

introducing a phosphorus-containing source and a boron-containing source into said processing chamber to deposit said BPSG insulating layer over said substrate.

19. The method as in claim 16, wherein said UV light has an energy level that is at least about 10 eV.

20. The method as in claim 16, further comprising performing said depositing and exposing steps in a substrate processing chamber.

21. The method as in claim 16, further comprising performing said depositing step in a first processing chamber and said exposing step in a second processing chamber.

22. A substrate processing apparatus comprising:

a processing chamber;

a substrate holder, located within said processing chamber, for holding a substrate;

a UV light source coupled to said processing chamber and disposed to transmit a UV light towards said substrate holder;

a controller for controlling said UV light source; and

a memory, coupled to said controller, comprising a computer readable medium having a computer readable program embodied therein for directing operation of said UV light source, said computer readable program including:

a first set of instructions for controlling a wavelength of UV light produced by said UV light source; and

a second set of instructions for controlling a duration said UV light source produces said UV light.

23. The apparatus of claim 22, wherein said computer readable program further includes a third set of instructions for controlling an energy level of said UV light produced by said UV light source.

24. The apparatus of claim 22, wherein said UV light source is selected from a UV lamp and a laser.

25. The apparatus of claim 22, wherein said processing chamber further comprises a window that is at least partially UV transparent, said window positioned between said UV light source and said substrate holder.

26. The apparatus of claim 22, wherein said first set of instructions operates said UV light source to produce said UV light having a wavelength that is between about 100 nm and about 200 nm.

27. The apparatus of claim 22, wherein said second set of instructions operates said UV light source for said duration between about thirty (30) seconds and about fifteen (15) minutes.

28. The apparatus of claim 23, wherein said third set of instructions operates said UV light source to produce said UV light having said energy level of at least 10eV.

29. The apparatus of claim 22, further comprising a gas distribution system coupled to said processing chamber for the deposition of an insulating layer on said substrate.

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